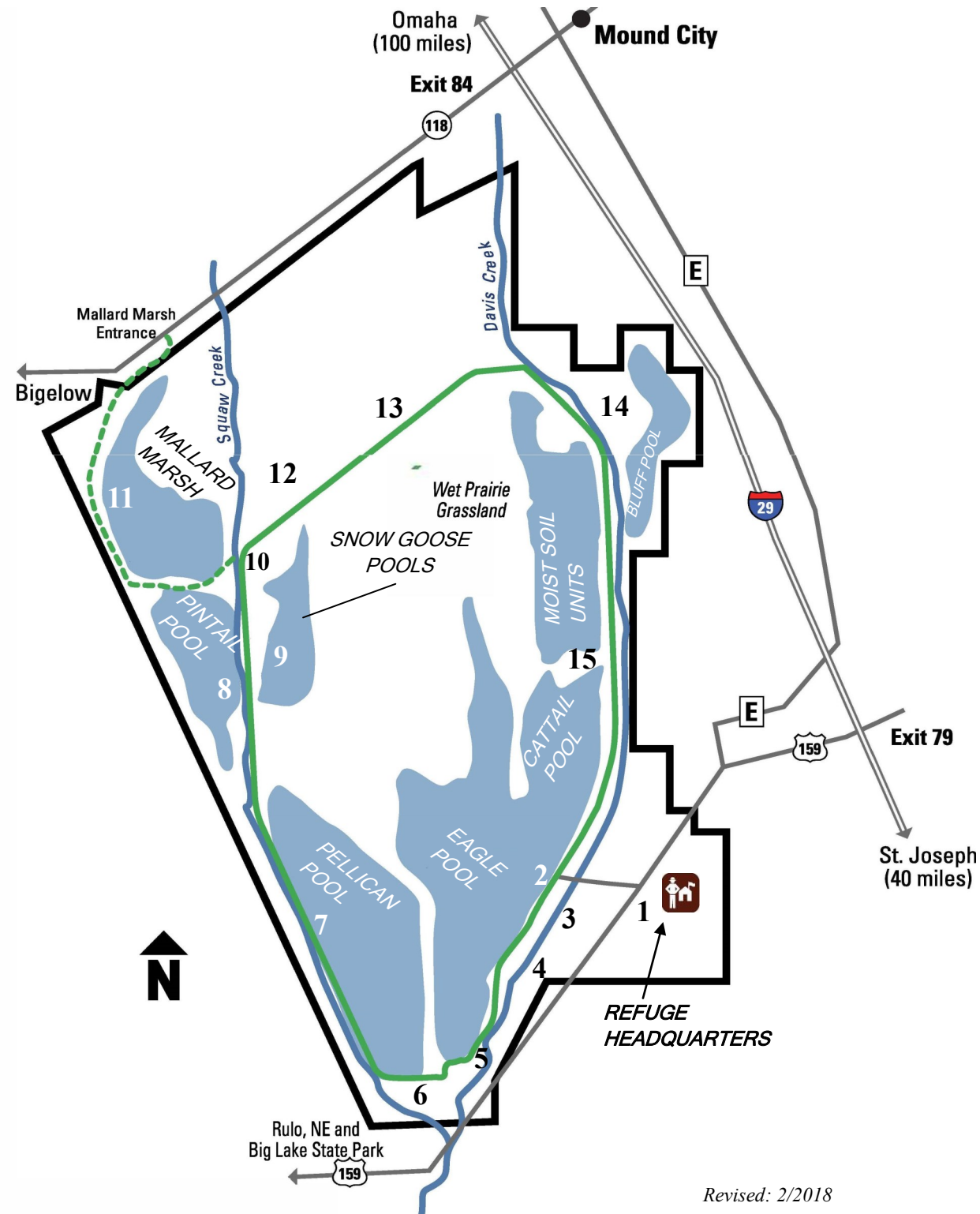


9 SNOW GOOSE POOLS— There are five individual pools in this complex. They contain moist soil plants that are beneficial food for ducks, and geese, such as smartweed, rice cutgrass, and wild millet. When controlled flooding begins in the fall, ducks and geese land here to eat the seeds floating in the water or on the bottom and pull up the plants. To the west (left) is Pintail Pool. You could see trumpeter swans and ducks sitting in the open water and eagles sitting in the trees and on the muskrat houses.

10 SQUAW CREEK WATER CONTROL STRUCTURE – The roller gate control structure was constructed in 1978 and is 35 feet long and 5 ½ feet high. When this big steel gate is lowered into the ditch, it backs up water. Water then moves through the tubes under the road in both east and west directions. It is the main source of water for many wetlands on the refuge, including Eagle and Pelican Pools.

11 MALLARD MARSH PUMP AND MONUMENT – A 91 foot well is used to flood this marsh. The marsh restoration project was a cooperative effort with Ducks Unlimited and many local donors. It was completed in 1991.

12 PRAIRIE RESTORATION –The native tall-grass prairies of big bluestem, little bluestem, Indian grass, and switchgrass have nearly vanished in the Midwest. In an effort to restore some of Missouri's natural prairies, refuge staff and volunteers harvest prairie and wildflower seed from the refuge and re-plant on the refuge. The native grasses and wildflowers help pollinators like bees, moths, and butterflies such as monarchs. The refuge is a major stop for thousands of monarch butterflies in August and September. They fuel up and rest here before completing their 3,000 mile journey back to Mexico for the winter. Refuge personnel do prescribed burns to help set back trees and encourage new growth from prairie grasses and wildflowers. Bobwhite quail, pheasants, and turkeys can also be seen here.



13 CROSS LEVEE 2 - The woods along this stretch is mostly silver maple and cottonwood. In the 1930's and 40's there were no trees in this area. Bobcats and white-tailed deer can be seen here because the woods provide cover, warmth in the winter, and are cooler in the summer. You may also see woodpeckers, pheasants or turkeys. To date, nine species of bats have been detected at the refuge and use this area. To the right of the road is a large cordgrass prairie, home of the state endangered prairie massasauga rattlesnake; one of only a few places left in Missouri where this snake is found. The cordgrass prairie is also Missouri's critically endangered habitat and only 0.01% of it remains to this day. This is the largest piece of cordgrass prairie left in northwest Missouri, with just over 1,000 acres. You can see birds of prey such as Northern harrier hawks and short eared owls that may swoop low to the ground to find their prey.

14 DAVIS CREEK WATER CONTROL STRUCTURE - This control structure was built in 1989. The large roller gate is lowered into the ditch and water is sent under the road to flood the moist soil units to the east and west. Water can continue to flow south to flood Eagle and Pelican Pools. The refuge has been designated a Globally Important Bird Area for many species of birds that depend on the wetlands and mudflats it provides. Watch for shorebirds feeding in the shallow water in the spring or fall as they probe the mud for insects and seed.

15 MOIST SOIL UNITS AND CATTAIL POOL. This area is a popular spot for sandhill cranes, ducks, and trumpeter swans to linger. There is a 14 acre area adjacent to the road managed for shorebirds. Stop at the pull off and watch for shorebirds feeding on the mudflats. Water in moist soil units are kept shallow to allow for dabbling ducks, such as mallards and Northern pintail, to tip over in the water to feed off the bottom. In the fall, ducks will feed on seeds from millet, smartweed, stick-tights, and toothcup, as they migrate south. In the spring, they will switch to bugs/invertebrates in the water and mud, for protein to meet energy needs. Hens need the calcium for egg laying and in the summer, ducklings need the protein for feathers.

5 EAGLE POOL WATER CONTROL GATES- These steel radial gates were first built by the Civilian Conservation Corps in 1940. It has since been updated in 2012 to the structure you see today. It is the primary outlet for all the water within Eagle Pool, 1,400 acres, and Pelican Pool 600 acres. When the gates are closed, they back up (or impound) water behind them and act like a big dam. When the gates are raised, water flows five miles south to the Missouri River. When water is released in the spring, fish migrate from the Missouri River up to the controls. People often fish or snag here when conditions allow.

6 PELICAN POOL DIKE *South Dam -* Pelican Pool on the right is 600 acres. During the flood of 1993 water was deep enough to flow across the road. Watch for muskrat houses here as you drive around the pool. Ducks, trumpeter swans, geese, and eagles often can be seen sitting on these houses. Snakes and turtles also use them for sunning. The two moist soil units are on the left and are managed for shorebirds and ducks. Water from Pelican Pool helps flood these two smaller units.

7 PELICAN POOL- Pelican Pool covers 600 acres. The vegetation that is growing out of the pool includes river bulrush, cattail, smartweed, millet, arrowhead and American lotus. Muskrats eat and build their houses out of some of these plants. Muskrats are an important part of the marsh because they keep more areas open for other wildlife, such as migrating ducks and geese. Marsh birds and water birds will nest in this pool during the summer months. In the summer months, keep your eye out for the secretive least bittern, a marsh bird that often imitates cattail. Least bitterns like to nest in the cattail reeds above water.

8 BALD EAGLE NEST – Eagles have nested at Loess Bluffs NWR since 1996. Since then there have been 7 nests that have been built on the refuge. The nest that is located at the southeast corner of Pintail Pool has fledged about 20 eaglets since its construction in 2009. More than 40 eaglets have fledged since 1996. Every first full weekend in December, the refuge celebrates a free Eagle Days event. More information can be found on the refuge website. Be sure to come on back and celebrate with us!

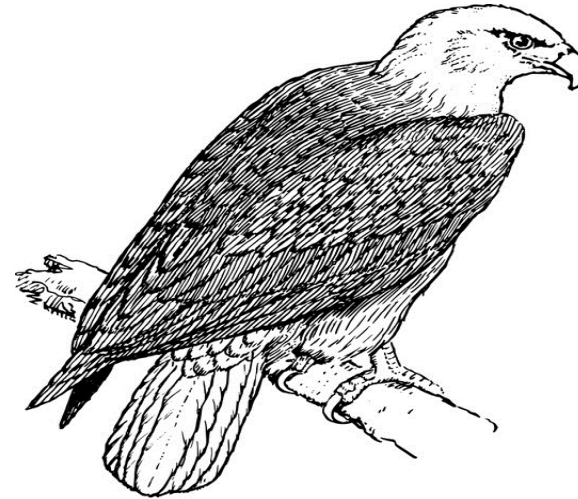
As a Globally Important Bird Area, a designated site along the Great Missouri Birding Trail, and one of Missouri's Watchable Wildlife Areas, Loess Bluffs National Wildlife Refuge provides an excellent opportunity to enjoy wildlife in its natural setting along the 10-mile auto tour route. There are more than 35 species of reptiles and amphibians, 37 species of mammals, and 310 species of birds. In the fall and winter months white-tailed deer, coyotes, and other wildlife will be active. Around the waterways and marshes of the refuge you can spot birds of prey, waterfowl, beavers, otters, and muskrats.

Loess Bluffs, which is managed by the U.S. Fish and Wildlife Service, is dedicated to the preservation and conservation of wildlife.

For more information write: Loess Bluffs National Wildlife Refuge, P.O. Box 158, Mound City, Missouri 64470, or phone 660/442-3187. Download additional maps and brochures or events on our refuge website: https://www.fws.gov/refuge/Loess_Bluffs/. Like us on Facebook at Loess Bluffs National Wildlife Refuge.



U.S. Fish & Wildlife Service



LOESS BLUFFS AUTO TOUR GUIDE

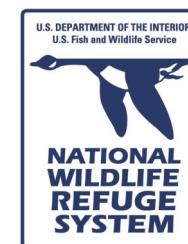
Loess Bluffs

National Wildlife

Refuge

*Mound
City,*

Missouri



1 HEADQUARTERS - Loess Bluffs National Wildlife Refuge (NWR) is one of more than 560 National Wildlife Refuges under the Department of the Interior in the United States. All national wildlife refuges are funded and managed by the Federal government. Loess Bluffs NWR is 7,440 acres. It was established in 1935 by Franklin D. Roosevelt as a resting and feeding area for migratory birds and other wildlife. The original roads, hiking trails and some of the old buildings were built by the Civilian Conservation Corps (CCC) in the mid - 1930s. The Refuge System is made up of more than 150 million acres. There is a refuge in every state with eight in Missouri. The National Wildlife Refuge System turned 100 years old in 2003.

2 OBSERVATION TOWER – Completed in 1995, this observation tower is accessible by all refuge visitors via ramp or steps and has a permanently mounted scope, offering good views of the 1,400 acre Eagle Pool, where waterfowl, snow geese, and eagles can often be seen in the spring and fall. Secretive marsh birds like rails can be seen darting in between the plants near the tower.

3 WOODLANDS *East of Davis Creek, Just South of the Tower* - During fall migration, bald eagles often can be seen sitting in these trees. The trees give the eagles a good place to rest and loaf, but they also are good vantage points from which to watch for sick and injured waterfowl. The eagles feed on the waterfowl in nearby Eagle Pool. Other birds of prey also can be seen sitting in the trees to the left.

4 Loess Bluffs to the left (pronounced “luss”) The Loess Bluffs overlooking the refuge from the east are a geologic formation that resulted from windblown bedrock that was deposited 30,000 to 500,000 years ago and are only found in a few other places in the world. Some of the plants growing on these hills are found nowhere else in Missouri. The undisturbed portion of the south facing slopes supports remnants of Missouri's native prairie, including Indian grass, big bluestem, and blazing star. Sometimes eagles and other birds soar overhead along the bluffs, taking advantage of updraft winds and thermal currents along the bluffs. There is a stone lookout tower built by the CCC in 1941 in the loess bluffs that overlooks the refuge. The trailhead can be found near the Visitor Center entrance, where there are 3 trails visitors can hike on.